

Serial No. 10/675,360

134083-1

Listing of the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the Application:

Claims 1-11 (cancelled)

Claim 12. (Currently amended) A method of recovering hydrogen comprising:
contacting at least one compound selected from the group consisting of AlB_2 , AlB_{12} , B_6Ca , B_6K , B_{12}Li , B_6Li , B_4Li , B_3Li , B_2Li , BLi , B_6Li_2 , BLi_3 , MgB_2 , MgB_4 , MgB_7 , NaB_6 , NaB_{15} , NaB_{16} or a combination comprising at least one of the foregoing borides with hydrogen to form a hydrogenated compound; and
heating the hydrogenated compound to recover the hydrogen.

Claim 13. (Currently amended) The method of Claim 12, wherein the heating is conducted using microwave radiation, convectional heating, ~~electrical resistive heating~~, or a combination comprising both ~~at least one~~ of the foregoing methods of heating.

Claim 14. (Original) The method of Claim 12, further adding a dopant comprising titanium, vanadium zirconium, yttrium, lanthanum, nickel, manganese, cobalt, boron, gallium, germanium, and the elements from the lanthanide series to the compound in an amount of less than or equal to about 20 wt% of the diffusion multiple.

Claim 15. (Original) The method of Claim 12, wherein the heating is effected by the heat from the exhaust of a fuel cell.

Claim 16. (Cancelled)

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Claim 17. (Currently amended) A method of recovering hydrogen comprising:
 contacting at least one compound of a diffusion multiple, wherein the diffusion
 multiple has the formula (II)



where ~~Li is lithium, Na is sodium, Mg is magnesium, K is potassium,~~ Ca is
 calcium, Al is aluminum; ~~B is boron,~~ C is carbon and N is nitrogen; ~~[[a, b, c,]] d[[, e]]~~
 and f may be the same or different and have values from 0 to 1; and x and y have values
 of about 1 to about 22; in hydrogen to form a hydrogenated compound; and
 heating the hydrogenated compound to recover the hydrogen.

Claims 18-29 (cancelled)